ABSTRACT OF THE DISCLOSURE

A variable operating valve apparatus for an internal combustion engine that provides for improved combustion performance without enlarging the size of the cylinder head in the transverse direction. The variable valve mechanism includes a camshaft axially supported by the cylinder head, three-dimensional cams formed on the camshaft, a rocker shaft actuator able to displace the rocker shaft in the axial direction according to engine operating conditions, and a lift volume setting mechanism that changes the amount of valve lift dependent on the extent of positional change of the rocker shaft in the axial direction. The camshaft is at least axially supported on the intake port side of the cylinder head, a fuel injector (which injects fuel into the intake port) is installed to the part of the intake sidewall at the intake port of the cylinder head, and a concave part is formed into the intake sidewall above the fuel injector extending inward toward the camshaft.